The total requirement of Fea()a &>r ^ne removal of 1 per emit. C is thus, 0-07+8-58=8-(50 per cent. . . - (7:*)-
The change of weight of metal owing to a, content of 1 per cent. C in the charge is thus By reduction of 3'53 kilogrammes 1<V...O»XO'7 'J--17 per cent,. Less 0 burnt out . ' . - - - 1-0() Gain of charge for 1 per cent. 0
(/.) INFLUENCE OF THE ELIMINATION OK THK IIKIMVINI! .A<;KNTR, BY MEANS OF IKON PEROXIDE ON TIII-; 11 MAT .HKQIUUKMMNT IN STEEL PKODUCITION.
From the preceding .figures, the inlhtenee e»xereis<>d by [b0 impurities of the iron on tlio lioa,t required tor production of steel admits of being approximately fixwl, for Uic enso tbat their removal is effected by means of iron puroxido addocl to already molten charges, and eouphul with iu^st, possiblo UHO of its oxygen, and in eonKoque.nco also, its iron content. The calculation is sot out in Tablo U, and rondors it a.pparc^r.i; that manganese is the only reducing agont which acts favourably under these circmnstancos, in that i-hn heat domand IK reduced about 7 calorlosporkilogrjinnnc^ Htrcl. All ilm romaiu-ing agents make an increased heat supply n<»t'<»Hsary, and the increased amounts aro as follows:—
For 1 per cent. Si, about (J5 calorics pi^r kilognuntuo H(,ci>J. . For 1 per cent. P, about 40 calories per kilogramme steel:
For 1 per cent. C, about 425 calories per kilogramme, steel ; and for 1 per cent. SiOa from imjjurities about f>0 calories.
By means of these figures, all influenc-eH which tin* composition of the charge exorcises on the course of the open-hearth process are approximately established.